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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,426	11/21/2001	Shinichi Miyazaki	0229-0675P	9797
2292	7590	11/02/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH		THOMPSON, CAMIE S		
PO BOX 747		ART UNIT		PAPER NUMBER
FALLS CHURCH, VA 22040-0747		1774		

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,426	MIYAZAKI ET AL.	
	Examiner	Art Unit	
	Camie S Thompson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on AfterFinal Amendment filed 10/8/2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6 and 8-20 is/are pending in the application.
 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-6 and 8-12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Examiner regrets the untimely reopening of prosecution.
2. Applicant's amendment and accompanying remarks filed October 8, 2004.
3. Examiner acknowledges applicant's submission of the terminal disclaimer.
4. The Double Patenting rejection of claims 1-6 and 8-12 as being obvious over Miyazaki et al., U.S. Patent Number 6,745,806 is withdrawn due to applicant's submission of the terminal disclaimer.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0619398.

The European reference discloses a steel cord for reinforcing rubber articles. The reference also discloses that the steel cord comprises a steel filament wave-shaped in a plane and 5-8 sheath filaments arranged around the core wherein the core has crest and trough portions in a repeated manner and the wave shape of the core is zigzag as per instant claims 1, 3 and 8(see Figure 1 and page 2, lines 30-35). The reference also discloses that the diameter of the core filament is 0.15-0.48 mm as per instant claim 4 (see page 3, lines 1-3). Claim 1 is a product-by-process claim. Even though product-by-

process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The manner in which the core filament and sheath filament are arranged does not make the steel cord in the present application different from the steel cord of the European reference. Both the present steel cord and the steel cord of the reference have a metal (steel) core filament wave-shaped in a plane with 5-8 sheath filaments arranged around the core wherein the core has crest and trough portions in a repeated manner and wave shape of the core is zigzag.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 5-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0619 398.

The European reference discloses a steel cord for reinforcing rubber articles. The reference also discloses that the steel cord comprises a steel filament wave-shaped in a plane and 5-8 sheath filaments arranged around the core wherein the core has crest and trough portions in a repeated manner and the wave shape of the core is zigzag as per

instant claims 1, 3 and 8(see Figure 1 and page 2, lines 30-35). The reference does not provide for the diameter of the sheath filaments as per instant claims 2, 5 and 6.

However, this is an optimizable feature. The diameter of the sheath filaments aids in rubber penetration. Discovery of optimum values of a result effective variable involves only routine skill in the art *in re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art to have a diameter of the sheath filaments be in the range 0.15 and 0.50 mm in order to have a steel cord that has enhanced rubber penetration in order to prohibit rust corrosion (see page 2, lines 6-11). Additionally, the reference does not disclose the wave pitch, wave height, torsion pitch and twist pitch as per instant claims 9-12. These features are optimizable.

These features affect the ability of the rubber to penetrate to the inside of the cord.

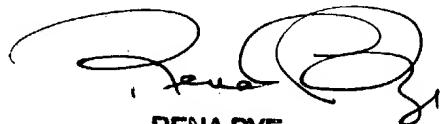
Discovery of optimum values of a result effective variable involves only routine skill in the art *in re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a wave pitch in the range of 3.0 and 9.0 mm; a wave height between 0.20 and 0.80 mm; a torsion pitch between 5.0 and 600.0 mm and a twist pitch at the time of twisting between 5.0 and 30.0 in order to prevent the corrosion of steel caused by watering entering the product because of increased rubber penetration.

Response to Arguments

9. Applicant's arguments with respect to claims 1-6 and 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye, can be reached at (571) 272-3186. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER *m120 (ay)*
A.U. 1774